

The logo graphic for Carnegie Mellon University, featuring a dark blue background with a grid of intersecting red, green, and yellow lines.

**Carnegie  
Mellon  
University**

# Institutional Master Plan 2022

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Campus Design and Facility Development

November 2022

## Introduction



### CMU Team

Jen Beck, Project Manager\*  
Don Carter, Senior Advisor  
Ralph Horgan, Assoc Vice President\*  
Megan Pierce, Project Associate  
Bob Reppe, University Architect\*  
*\*presenting to Council*

### Urban Design Consultant - UDA

Eric Osth  
Ashleigh Walton

### Mobility Consultant - GAI Consultants

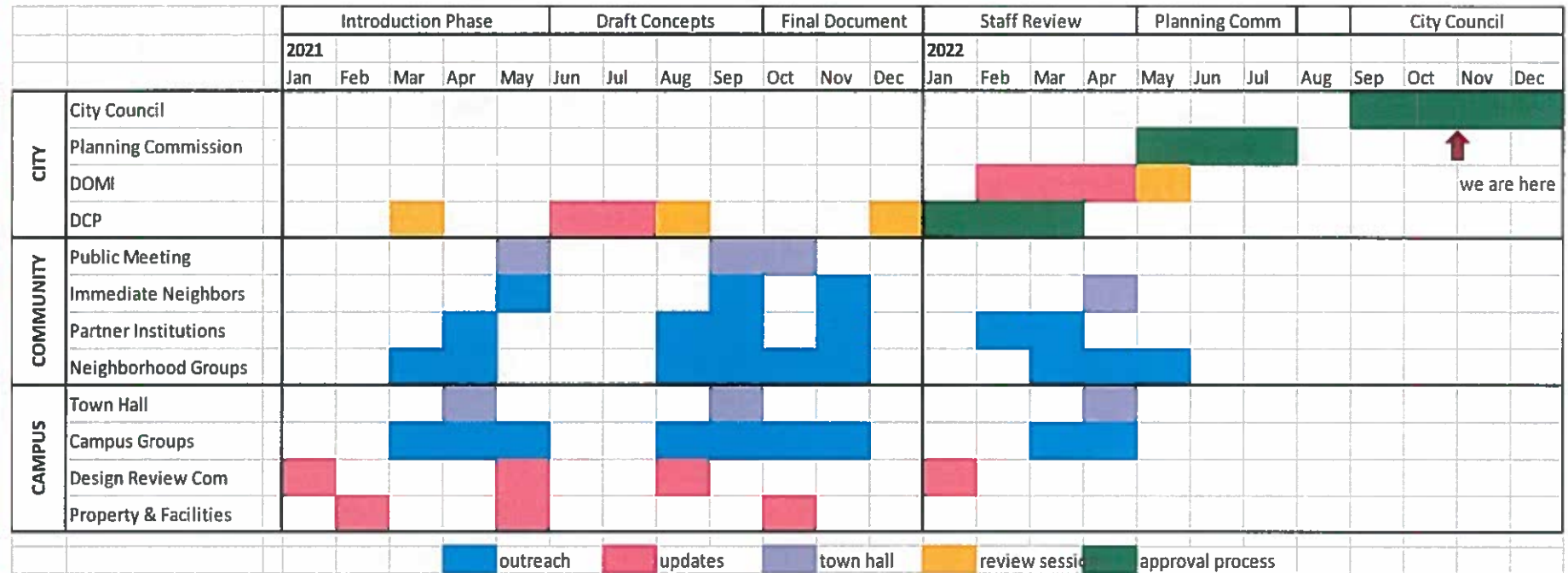
Rich Krajcovic  
Todd Wilson

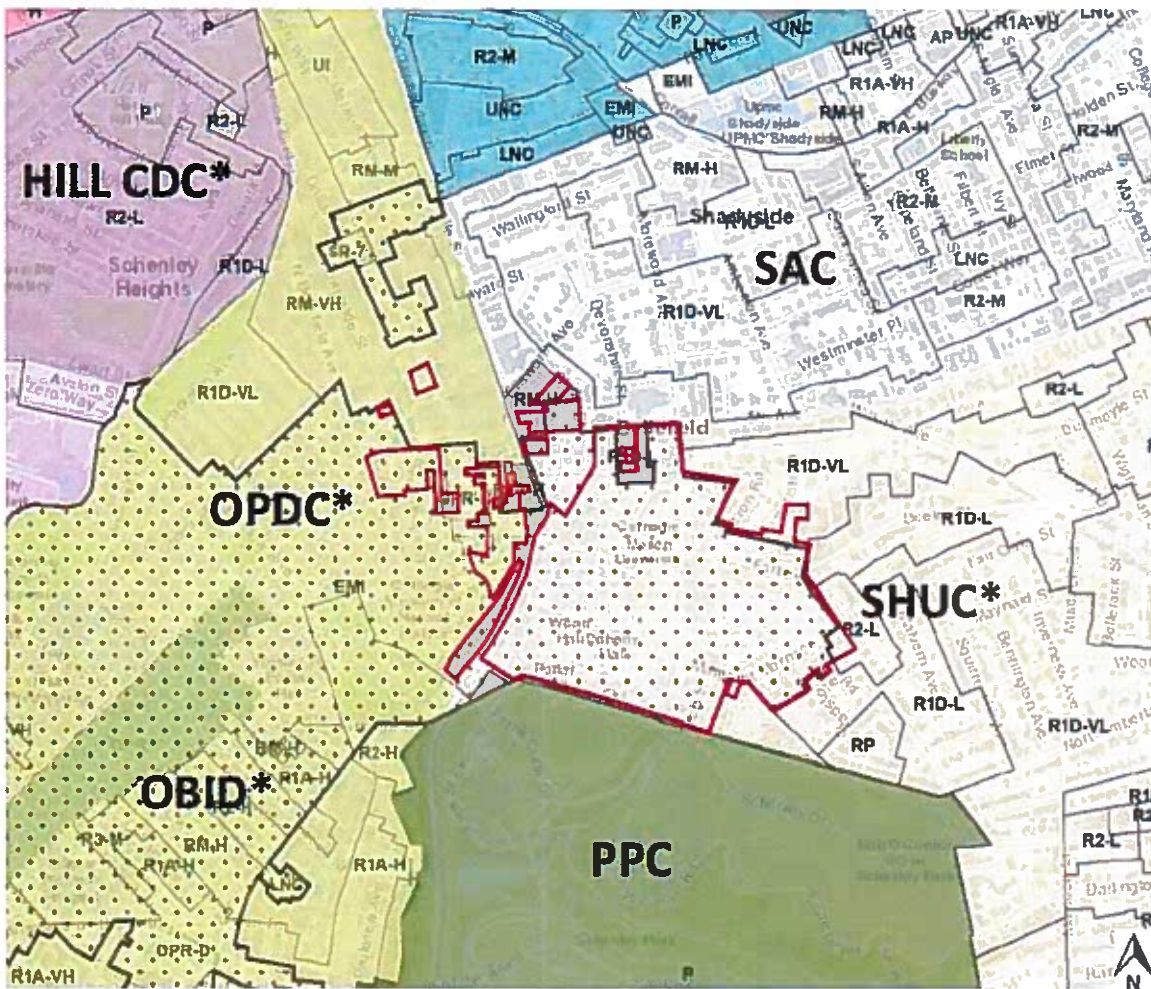
### Sustainability - evolveEA

Elijah Hughes  
Christine Mondor



## Schedule





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(Map by City of Pittsburgh)

## Community Engagement

-  Zoning Districts
-  Carnegie Mellon University Property in 2022 IMP
-  Oakland Planning and Development Corporation (OPDC)
-  Oakland Business Improvement District (OBID)
-  Shadyside Action Coalition (SAC)
-  Squirrel Hill Urban Coalition (SHUC)
-  Hill Community Development Corporation (HILL CDC)
-  Pittsburgh Parks Conservancy (PPC)
-  \* Registered Community Organizations (RCO)

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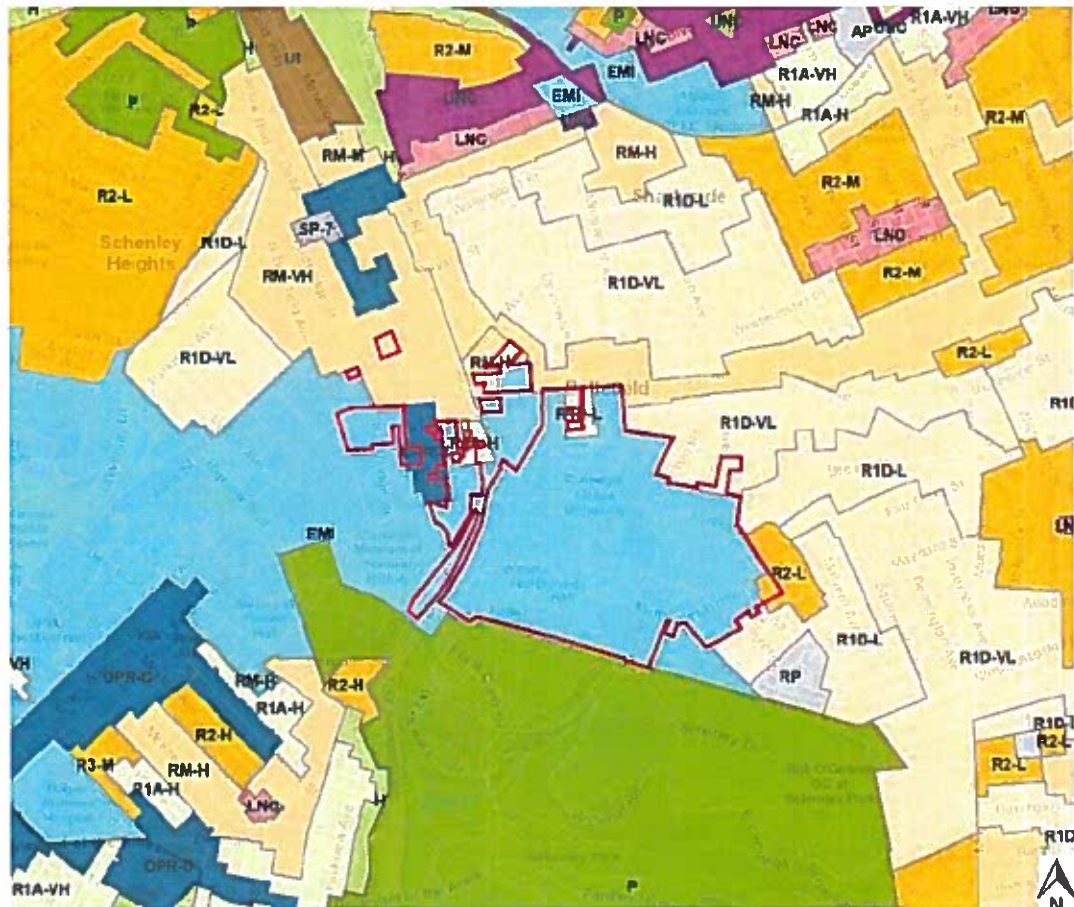
## Outreach

Campus Meetings	Date(s)
Academic Leadership Forum	14 Apr 2021, 12 Jan 2022
Academic Leadership Group	18 Nov 2021
Advisory Team	bi-monthly
Board of Trustees: Property & Facilities Committee	15 Feb 2021
Buggy Alumni Association	16 Feb 2022
Center for Shared Prosperity Reading Group	9 Feb 2022
CMU Campus Police	29 Jun 2021, 1 Nov 2021
Counseling & Psychological Services	9 May 2021
Dean's Council	2 Mar 2021
Design Review Committee	27 Jan 2021, 25 Aug 2021
DOSA Leadership	10 Mar 2021
Emergency Risk Management	26 Mar 2021, 16 Jul 2021
Facilities Management IT Group	9 Jun 2021
Facility Coordinator	13 May 2021
Faculty Senate	6 Apr 2021
Faculty Senate Executive Committee	16 Mar 2021, 20 Oct 2021
Global Goals Committee	2 Jun 2021
Graduate Student Assembly	1 Sep 2021
Greek Students Coalition	2 Dec 2020
Green Practices Committee	24 May 2021
Human Resource	29 Mar 2022
ISR Faculty	08 Feb 2022
Office of International Education	15 Apr 2021
Parking & Transportation Committee	21 Apr 2021, 20 Oct 2021
President & Provost	8 Feb 2021, 23 Apr 2021
School of Architecture	20 Apr 2022
Staff Council	18 Mar 2021, 18 Nov 2021, 20 Jan 2022
Student Affairs Leadership Forum	10 Mar 2021, 10 Nov 2021
USAC	8 Mar 2021, 26 Oct 2021
Undergraduate Student Senate	8 Apr 2021
University Communications & Marketing	3 Mar 2022
University Town Hall	29 Apr 2021, 28 Apr 2022
USAC	9 Mar 2021, 19 Oct 2021
Waste Management Team	15 Sep 2021

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Community Meetings	Date(s)
Atrium	8 Feb 2022
Bellefield Area Citizens Association	9 Mar 2021, 10 Aug 2021, 8 Mar 2022
Carnegie Museums	22 Mar 2021
Joint OPDC/SHUC DAM	26 Oct 2021
Joint OPDC/SHUC/OBID DAM	13 Dec 2021
Mobility	16 Apr 2021, 13 May 2021
Neighbor Town Hall Phase 1	5 May 2021, 6 May 2021, 11 May 2021
Neighbor Town Hall Phase 2	9 Sep 2021, 9 Sep 2021, 13 Sep 2021
Oakland Task Force	9 Mar 2021, 14 Sep 2021, 8 Mar 2022
Oakland Planning and Development Committee	30 Mar 2021, 31 Aug 2021
Park Mansions	14 Jan 2021
Pittsburgh Parks Conservancy	monthly
Shadyside Action Coalition	31 May 2021, 12 Aug 2021, 10 Mar 2022
Schenley Farms	23 May 2021
Squirrel Hill Urban Coalition	2 Mar 2021, 3 Aug 2021, 1 Mar 2022
University of Pittsburgh - Community Engagement	20 Jul 2021
University of Pittsburgh - IMP Team	2 Feb 2021, 22 Apr 2021
City Meetings	Date(s)
City Council: Erika Strassburger	21 Jan 2021, 30 Sept 2021
City Council: Corey O'Connor	22 Feb 2021
City of Pittsburgh: Forestry, Public Works	8 Jul 2021
City of Pittsburgh: Resilience	19 Aug 2021
DCP: Neighborhood Planners	14 Jul 2021
DCP: Stormwater, Tree Canopy, Open Space	29 Jul 2021
DCP: DOMI	10 Mar 2021
DOMI	11 Mar 2021, 16 Jul 2021
DOMI, Port Authority	28 Jun 2021, 7 Oct 2021
GSA, DCP: Sustainability	6 Jul 2021, 21 Jul 2021
Performance Targets Meeting 1	30 May 2021
Performance Targets Meeting 2	30 Aug 2021
Performance Targets Meeting 3	17 Nov 2021
Pittsburgh Water and Sewer Authority	24 Aug 2021

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(Map by City of Pittsburgh)

## Existing Conditions Maps

### Zoning Code Reference

#### 905.03.D.3 Institutional Master Planning Area

An Institutional Master Plan shall illustrate and identify the current land use of all the area within the EMI District, contiguous properties, and properties within one thousand (1,000) feet of the EMI District which are under the control of the institution.

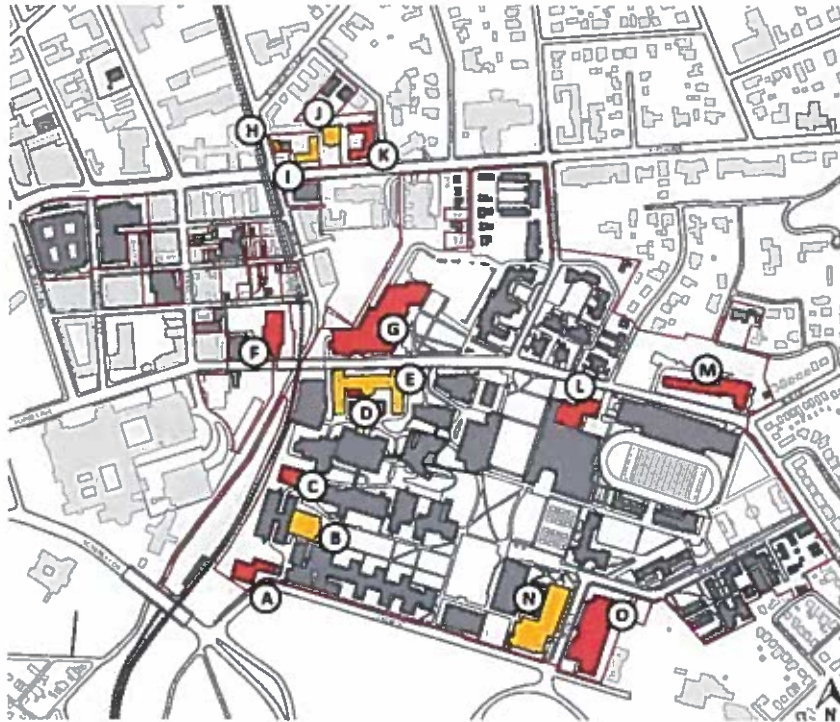
### Zoning Code Reference

#### 905.03.D.4 (c) Existing Property and Uses

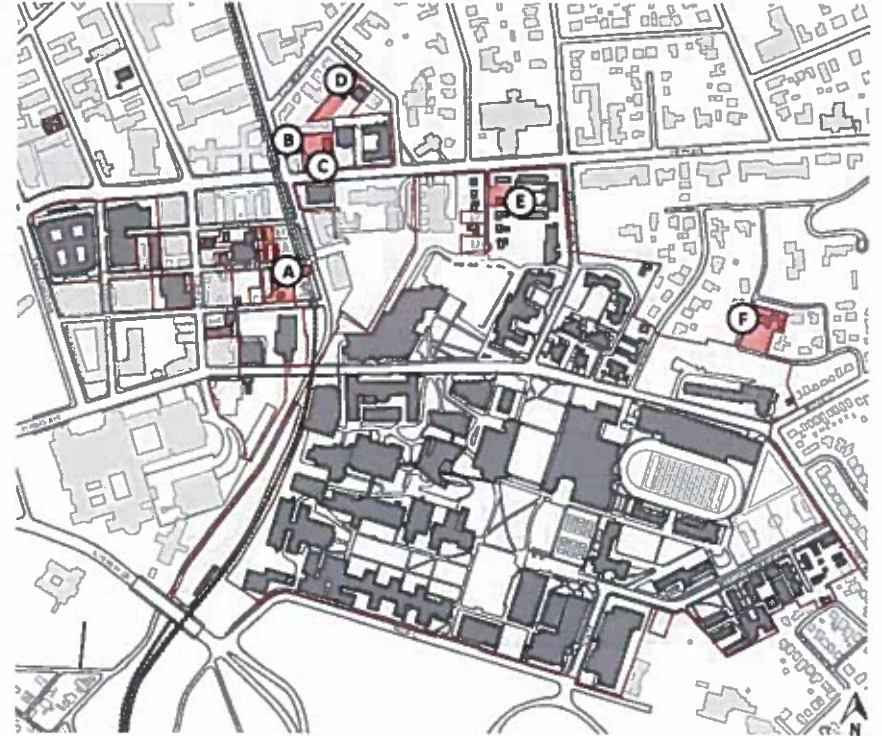
The IMP shall include a description of land, buildings, and other structures owned or occupied by the institution as of the date of submission of the IMP. The following information shall be required: (1) Illustrative site plans showing the footprints of each building and structure, together with roads, sidewalks, parking, landscape features and other significant site improvements; (2) Land and building uses; (3) Gross floor area in square feet; (4) Building height in stories and feet; and facilities, including a statement of the approximate number of parking spaces in each area or facility.

## Campus Developments: 2012 - 2022

2.2.16 Projects developed since 2012



2.2.15 Properties acquired since 2012



### Strategy for Campus Growth

- optimize existing land and buildings
- connect the Historic Core to the North Campus and to the Craig Street Area

### Strategy for Academic Spaces

- enhance and expand teaching spaces
- create academic spaces that maximize flexibility

### Strategy for Quality Public Spaces

- create dynamic open spaces
- develop the front door to campus at Forbes and Morewood
- increase the quality of campus space

### Strategy for a Sustainable Campus

- continue to innovate and be a leader in sustainable building and operating practices
- Foster the development of emerging sustainable technologies

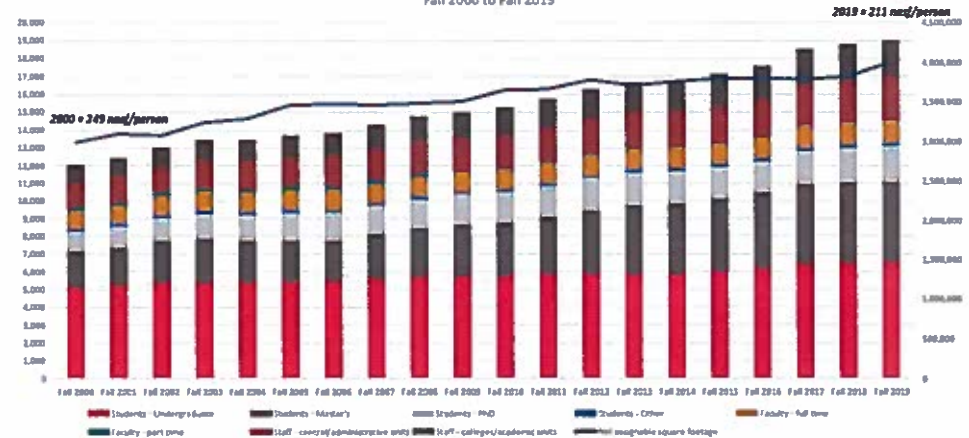
## Institutional Needs

### Zoning Code References

#### 905.03.D.4 (c) Needs of the Institution

The IMP shall include a summary and projection of the Institution's current and future needs for the following facilities: Academic; Service; Research; Office; Housing; Patient care; Public assembly; Parking; and Other facilities related to the institutional use.

Population and space trends - Pittsburgh location only  
Net assignable square footage includes owned and leased space  
Fall 2000 to Fall 2019





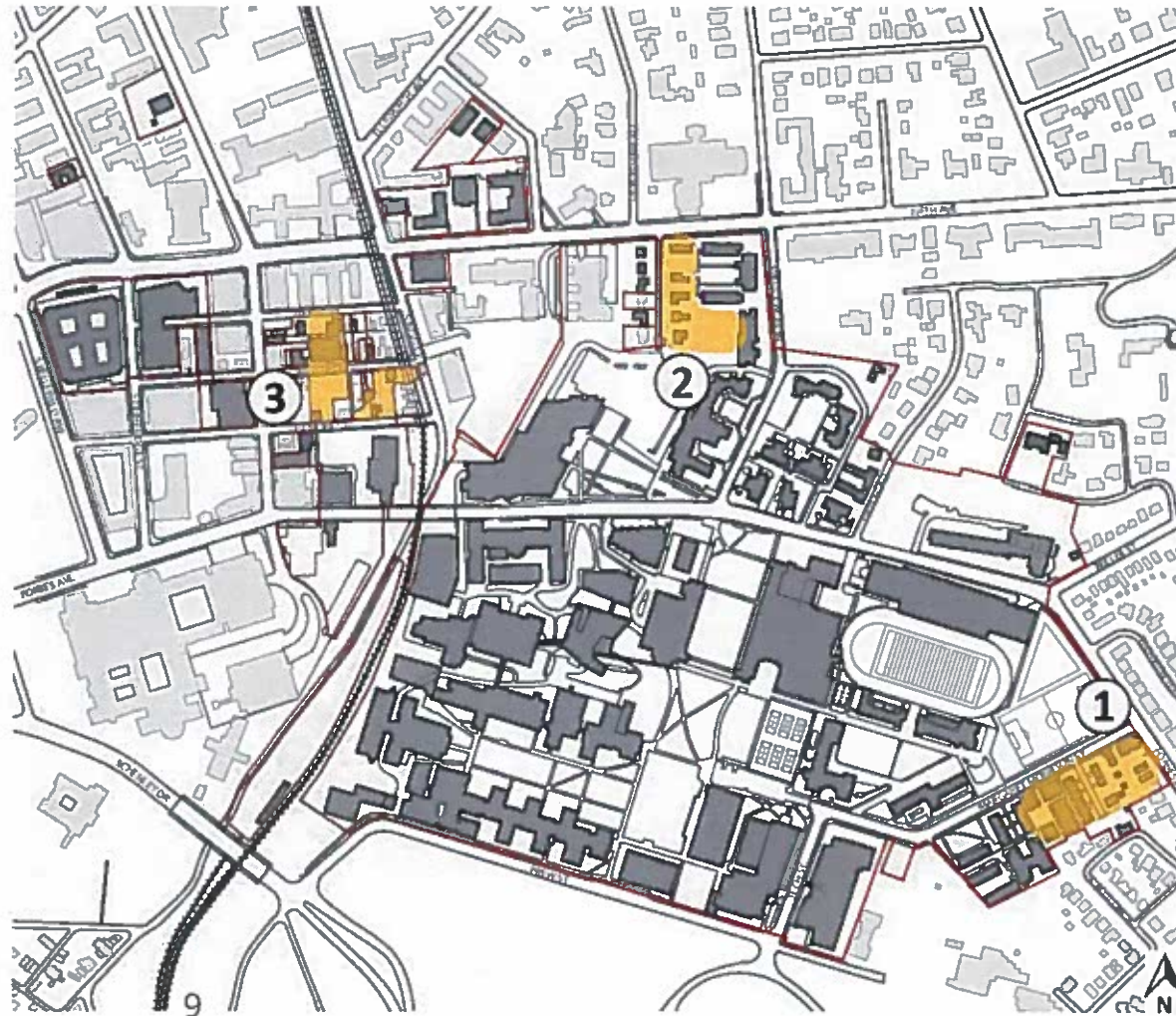


# Long Term Vision

## Zoning Code Reference

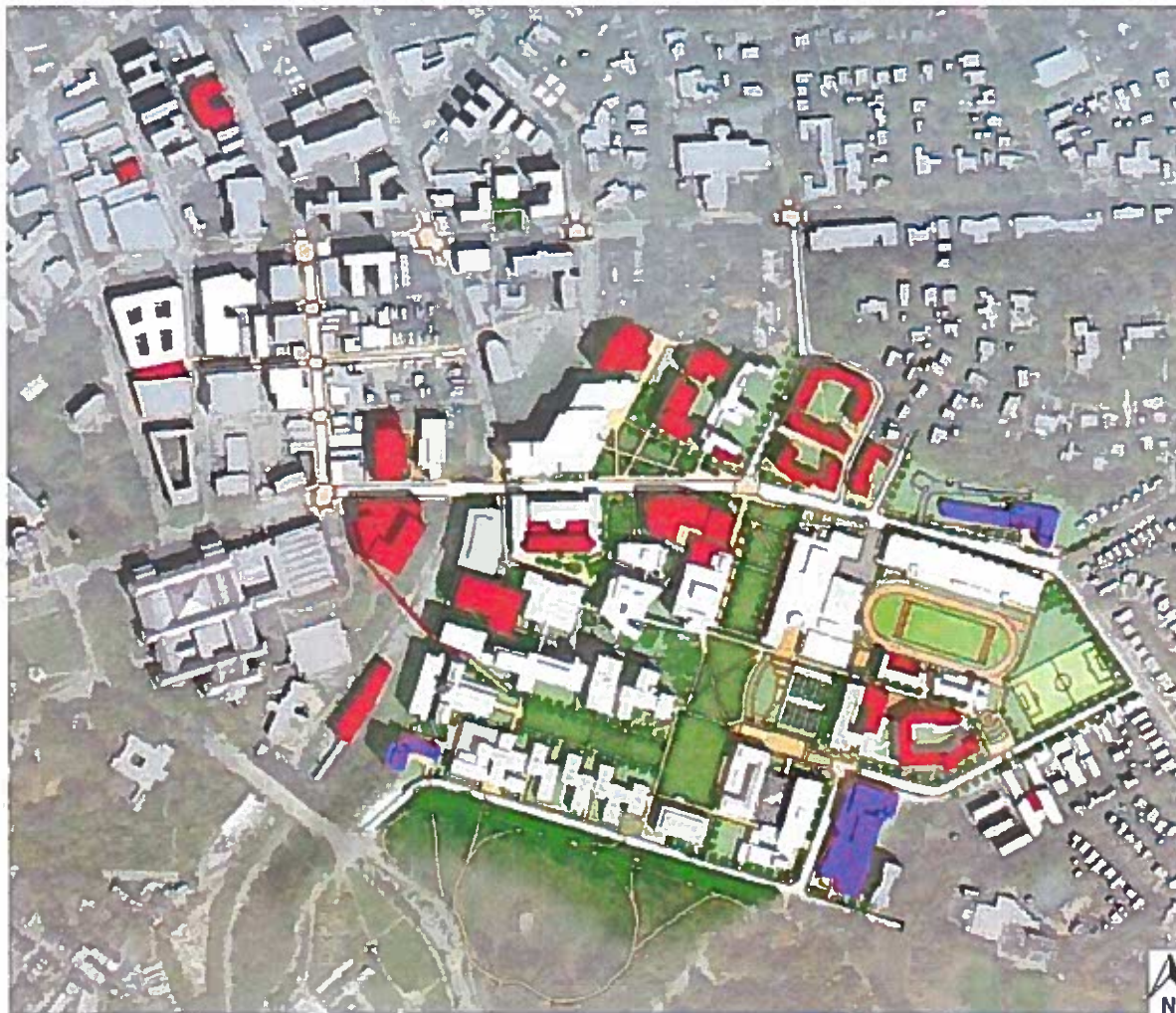
905.03.D.4 (f) Twenty-five Year Development Sites

The IMP shall include written and graphic materials identifying future development sites in addition to those noted in the Ten-Year Development Envelope. This information shall include, at minimum, the size and location of each parcel which may be developed within a twenty-five year period.



-  Carnegie Mellon University Property in 2022 IMP
-  Carnegie Mellon University Existing Buildings
-  Future Development Sites
- 1 Margaret Morrison Street District
- 2 East side of Devonshire Road
- 3 Henry/Winthrop/Filmora Area (Infill sites owned by the university)

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## 10 Year Plan

### Zoning Code Reference

#### 905.03.D.4 (e) Ten-Year Development Envelope

The IMP shall include a description of the envelope within which development will occur in a ten-year time frame. The development envelope is the maximum amount of development proposed by an institution, which can be supported through impact studies. The intent of this provision is to provide the institution with flexibility regarding the future development potential of its campus, while addressing the potential impacts of that development on the surrounding neighborhoods.

The development envelope shall include the following;

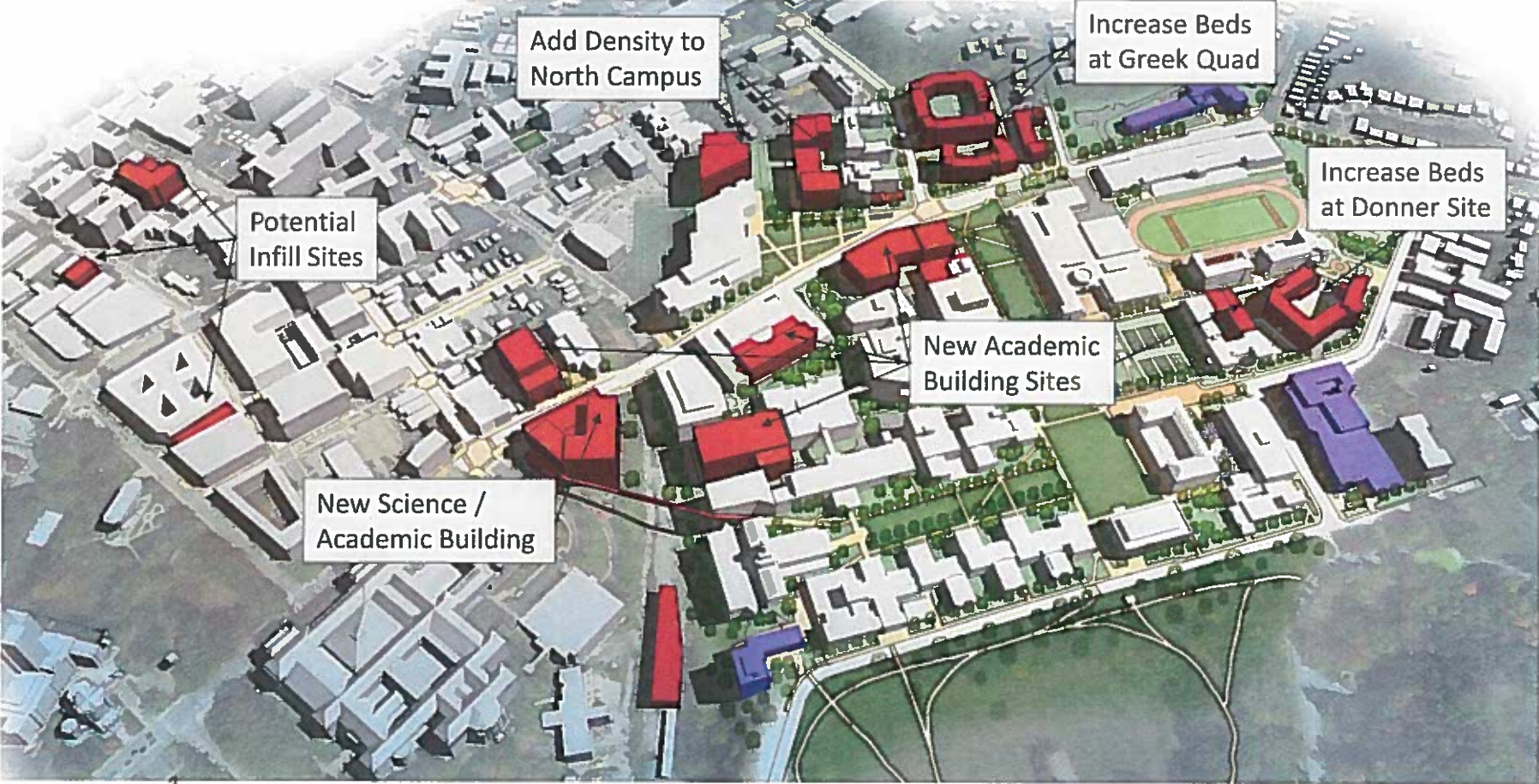
- (1) Location of each potential development site;
- (2) Maximum Floor Area of structures for each potential development site;
- (3) Total Maximum Floor Area for IMP structures;
- (4) Height of possible structures;
- (5) Required setbacks on each parcel;
- (6) Other factors which may affect the size and form of buildings; and
- (7) Total number and location of parking spaces which will occur within a ten-year period.

 Project Under Construction

 Proposed Development Site

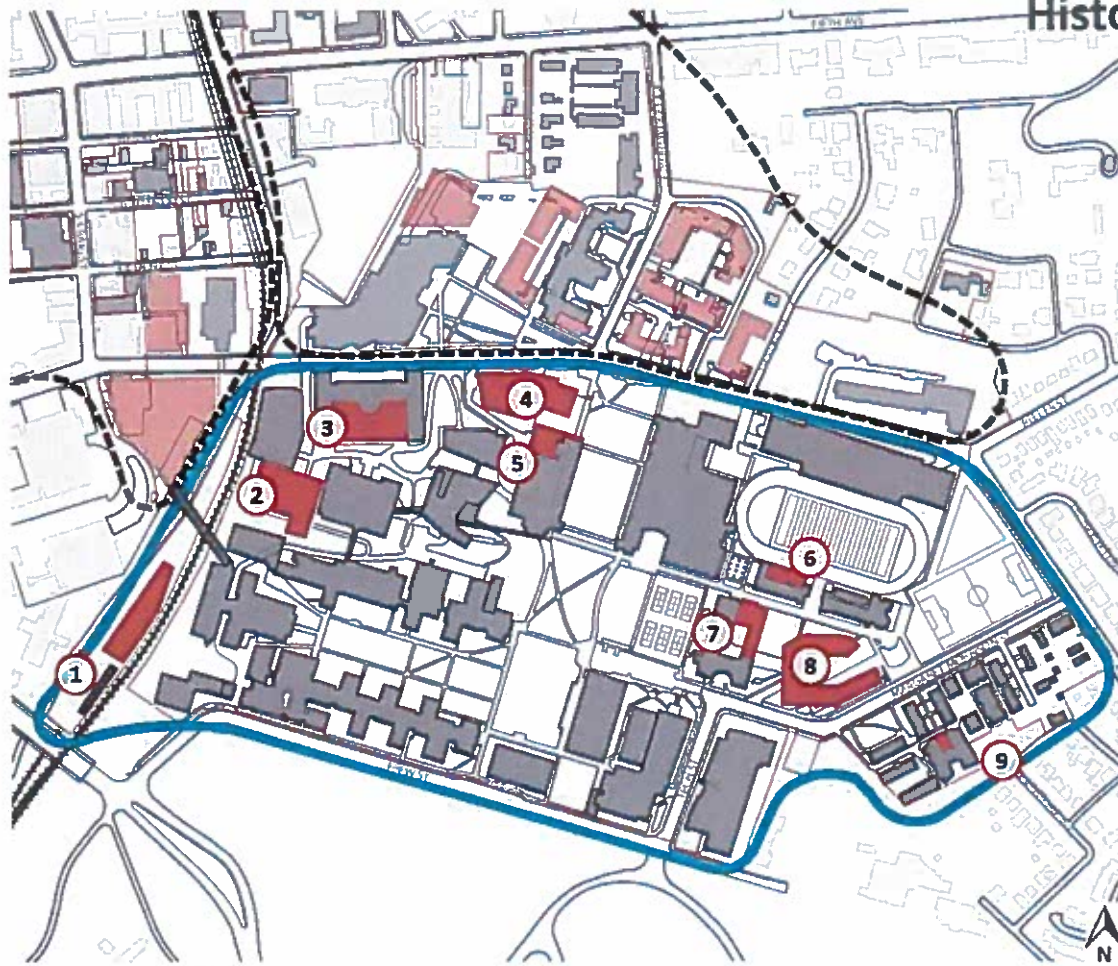
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# 2022 IMP Development Targets



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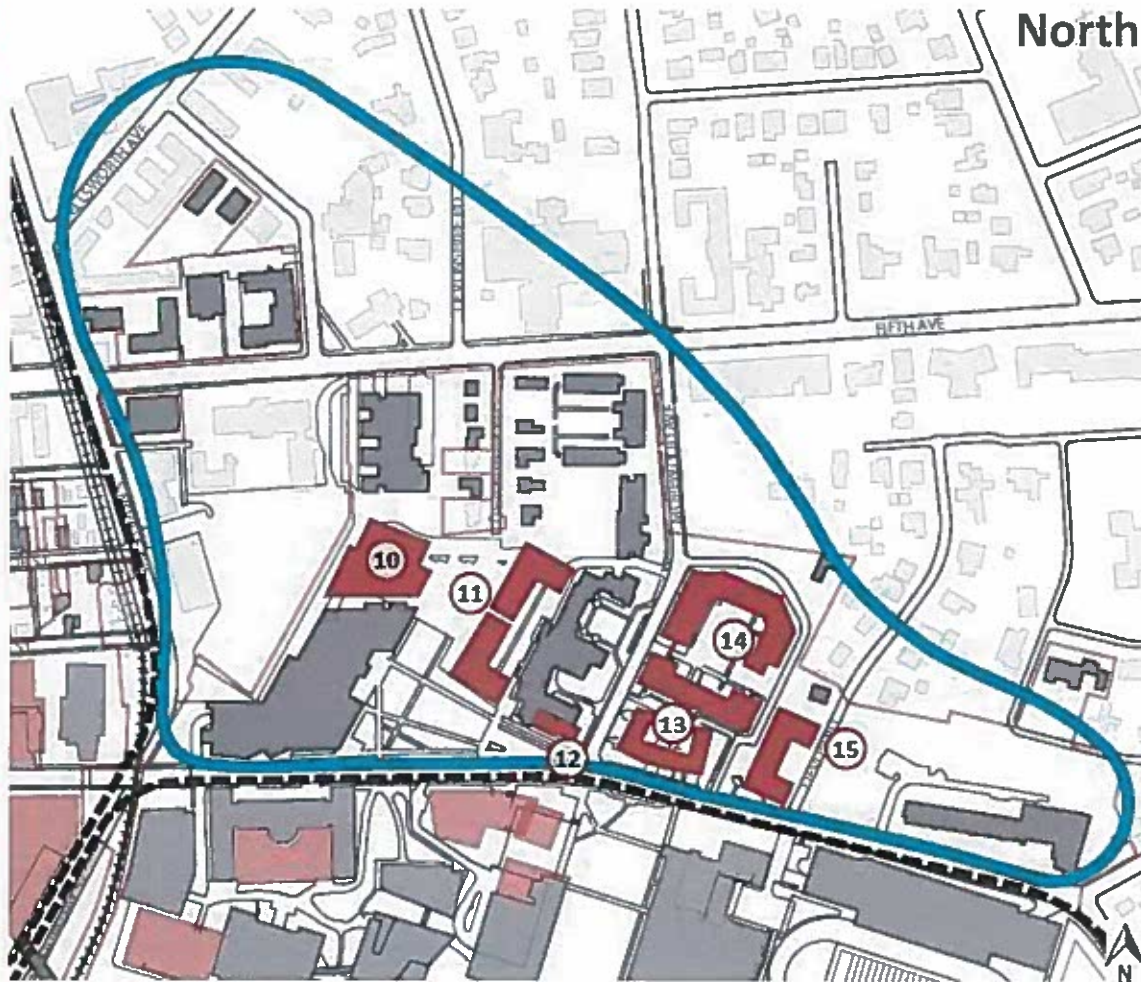


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## Historic Core Development Sites

- 1 New Operations Building
- 2 New Academic Building
- 3 Academic Building Expansion
- 4 New Academic Building
- 5 Academic Building Expansion
- 6 Student Support Expansion
- 7 Academic Building Expansion
- 8 New Mixed Use Building
- 9 Student Support Expansion

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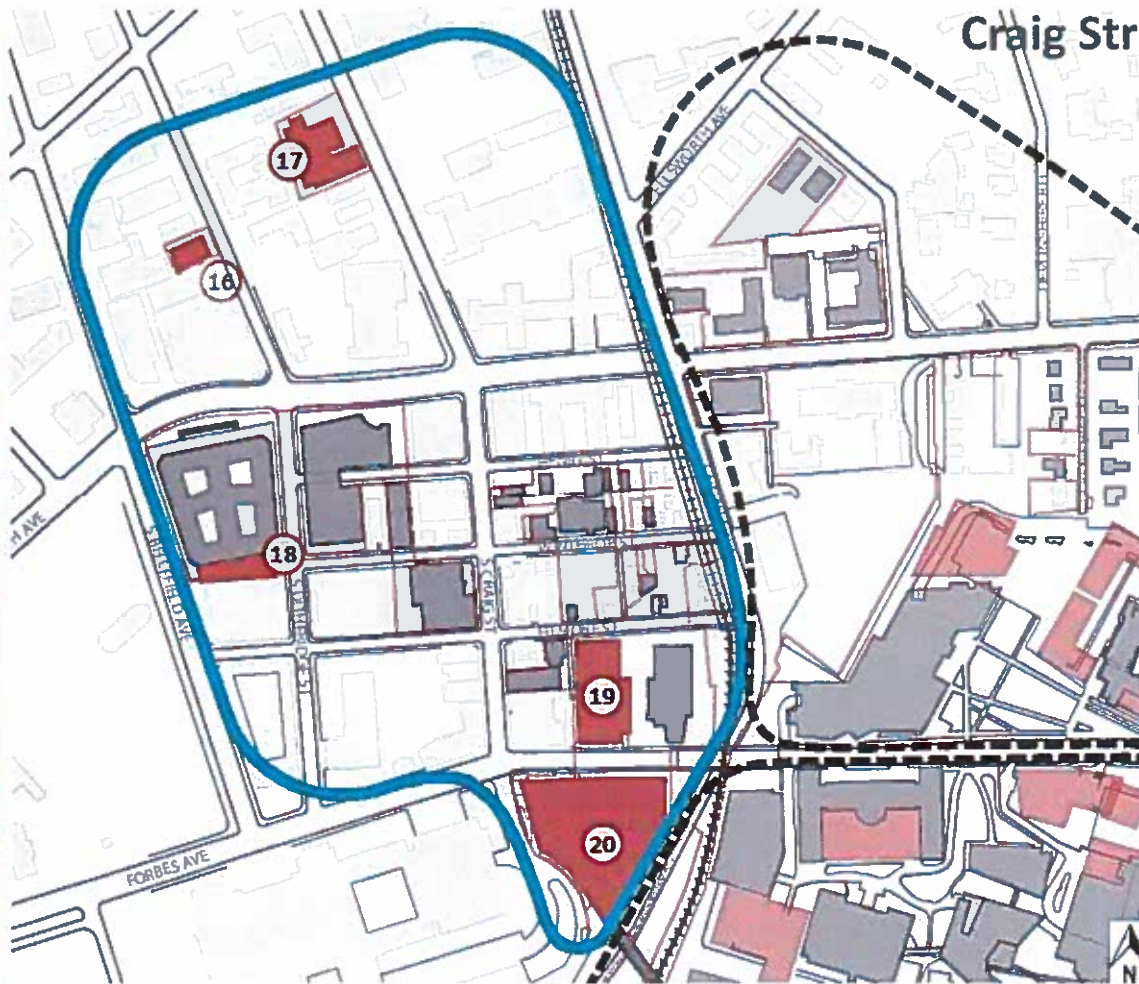


## North Campus Development Sites

- 10 New Academic Building
- 11 New Mixed Use Buildings
- 12 Student Support Expansion
- 13 New Mixed Use Building
- 14 New Residential Buildings
- 15 New Residential Building

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## Craig Street Area Development Sites

- 16 University Support Building
- 17 New Residential Building
- 18 Academic Building Expansion
- 19 New Academic Building
- 20 New Academic Building



### Building Standards

- Siting, Height and Massing
- Setbacks and Stepbacks
- Entrances and Transparency
- Materials and Composition
- Connections Across Forbes Ave



### Public Realm Standards

- Landscape Design
- Circulation
- Furniture and Art



### Transportation Standards

- Parking
- Curb Cuts
- Service and Loading
- Transit Facilities
- Bicycles



## Urban Design Guidelines

### Zoning Code Reference

#### 905.03.D.4 (j) Urban Design Guidelines

The IMP shall include design guidelines and objectives for new and renovated buildings and structures to assure their compatibility with supporting neighborhoods and districts and to minimize potential adverse impacts on historic structures and historic districts. Urban design guidelines shall include listings of appropriate materials, height, bulk, massing, and colors that will be used to guide the course of proposed and future development.

- Create new & improved pedestrian pathways with strengthened walkable neighborhood connections
- Increase pedestrian safety and comfort utilizing with upgraded signaling, signage, lighting, and crosswalks
- Add bicycle amenities & build additional cycling infrastructure
- Increase connectivity of overall cycling network and support options for all wheeled mobility users
- Engage partner institutions to develop shared shuttle services (“microtransit”)
- Institute Transportation Demand Management (TDM) to reduce SOV mode share and greenhouse gas emissions
- Use improvements to achieve goal of NO NET NEW PARKING

## Mobility Goals

### Zoning Code Reference

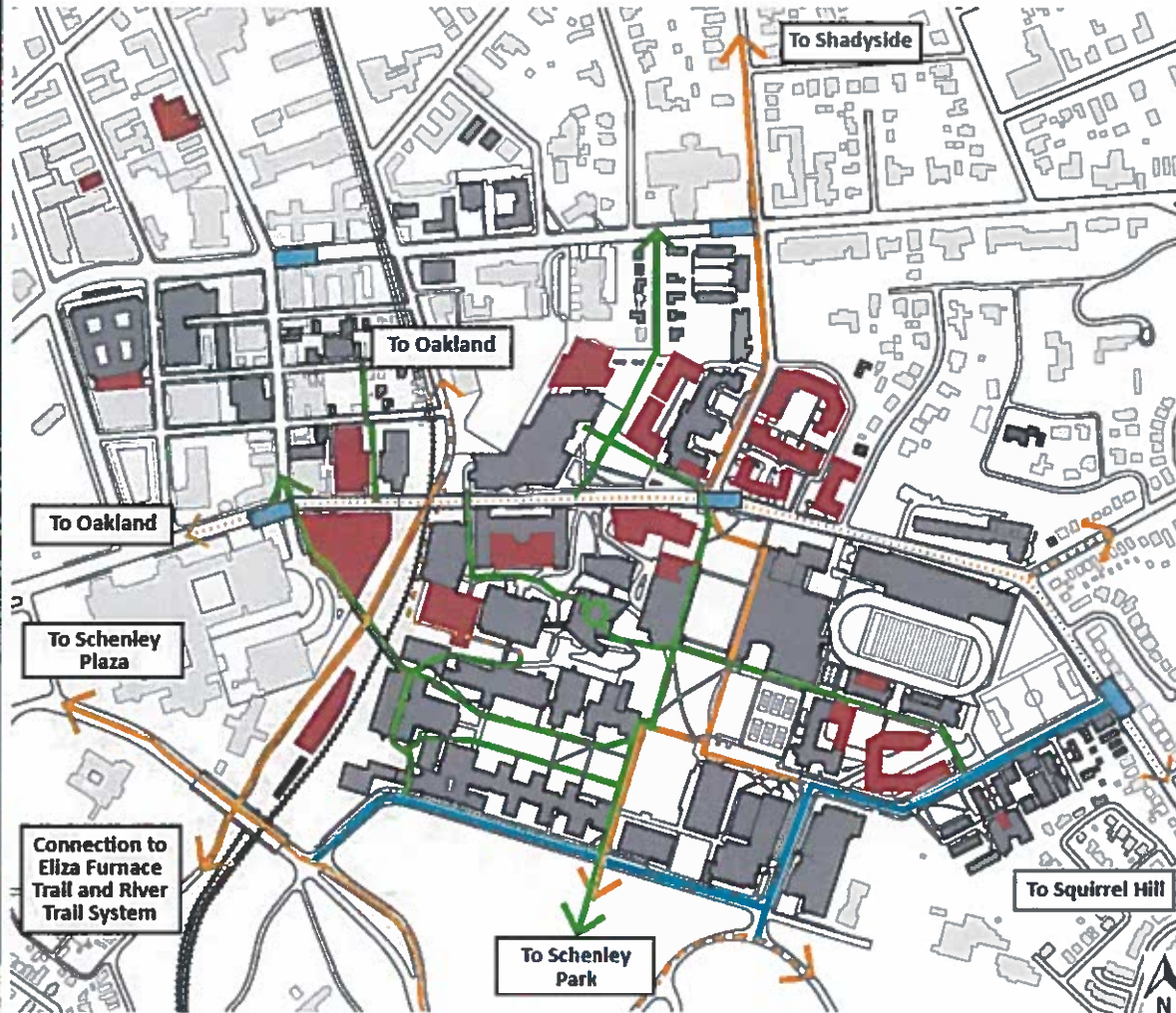
905.03.D.4 (g) Transportation Management Plan

The IMP shall include a transportation and parking management plan, based on the results of the transportation study that identifies any traffic mitigation measures to be employed.



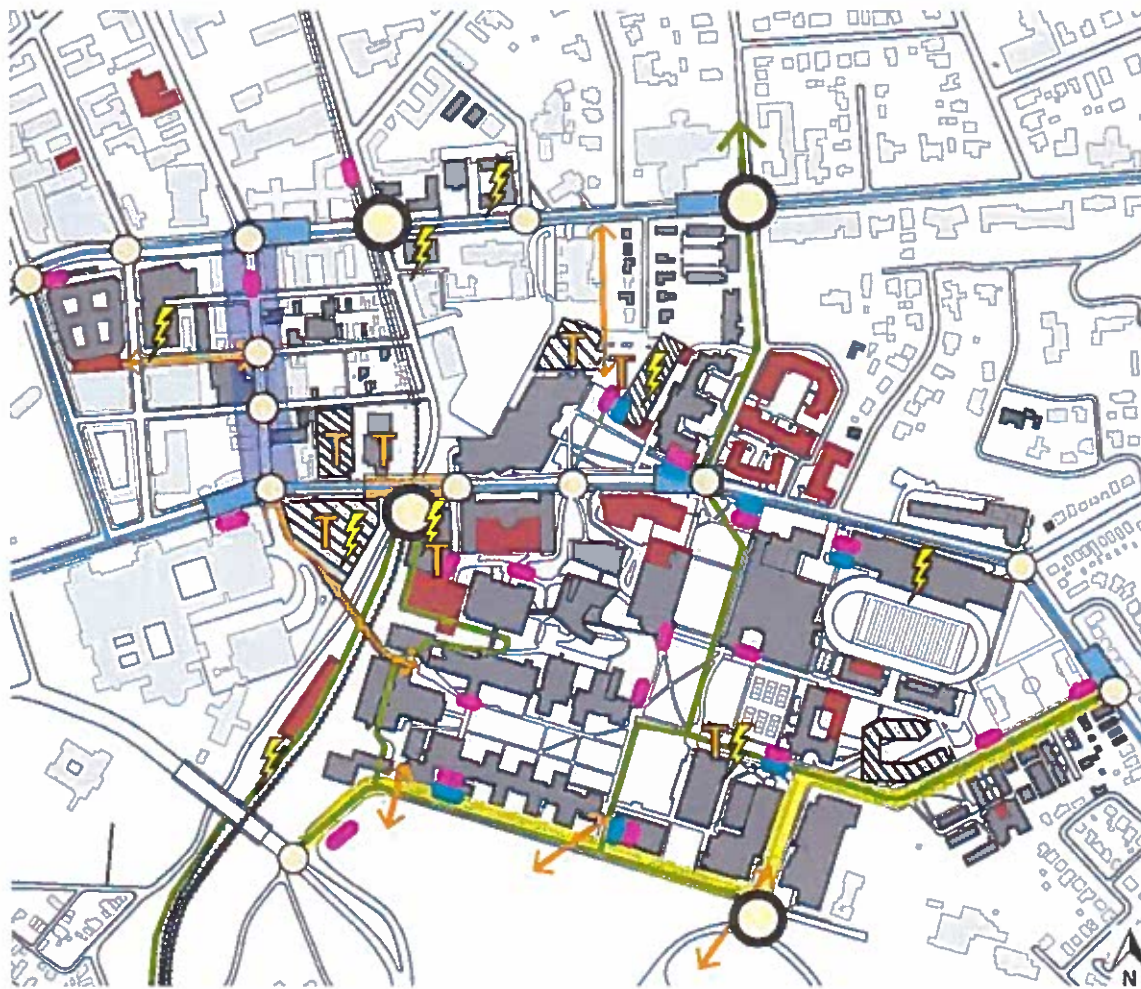


# Mobility Network



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## Mobility Improvements

- Carnegie Mellon University Existing Buildings
- Development Sites
- Proposed Pedestrian Connections
- Pedestrian Oriented Intersections
- Forbes Bridge Improvements
- Proposed Bike Connections
- Frew/Tech/Margaret Morrison Neighborway
- Healthy Ride Stations
- Scooter Parking
- S Craig Urban Design Improvements
- Future BRT & Stations
- Improved Intersections
- Tandem Parking
- Charging Centers
- New Structured Parking

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- 1 Continue to reduce/minimize consumption with ever-increasing higher efficiency in buildings, use patterns, and behavior
- 2 Continue to invest in cleaner fuel generation & fuel sources
- 3 Continue to create redundancy & systems that can address climate change challenges
- 4 Continue pattern of Green House Gas reductions
- 5 Continue to analyze results every year against peer group & 2005 base year
- 6 Continue to manage stormwater in groundbreaking systems to reduce inputs to systems and reuse water

## Sustainability Goals

### Zoning Code Reference

#### 905.03.D.4 (h) Environmental Protection Plan

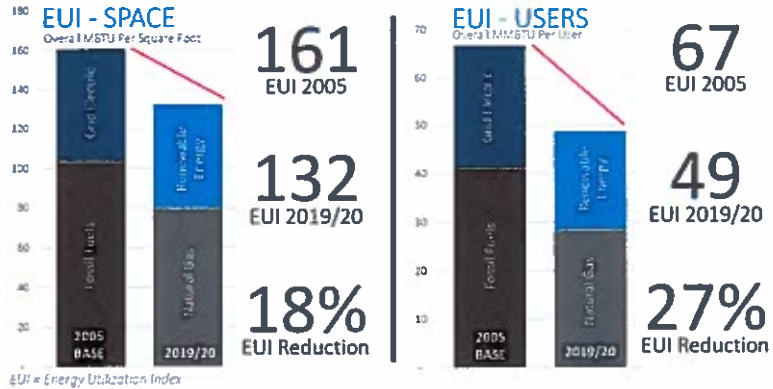
The IMP shall identify all sensitive environmental resources within the IMP area, as well as any view corridors that traverse the IMP area. The IMP shall identify Environmental Overlay Districts that affect the IMP area and shall include reports on those conditions as required in Chapter 906. The IMP shall identify areas of the IMP area which may be subject to the Environmental Performance Standards of Chapter 915. The plan shall identify the measures that will be used to mitigate impacts for each of these conditions.

In 2009, Bellefield Boiler Plant Supervisors Voted to Switch to Natural Gas to Lower Current Plant Emissions by 60%





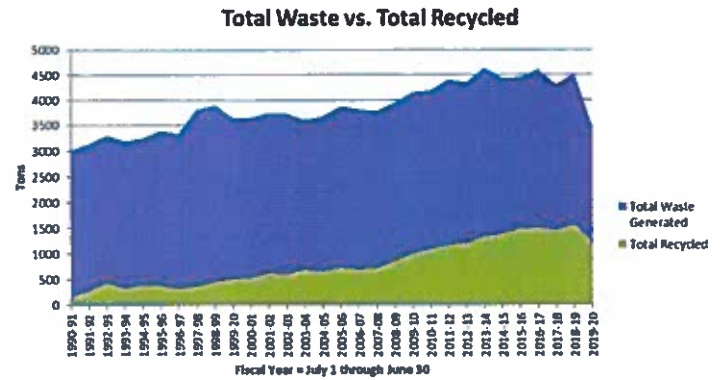
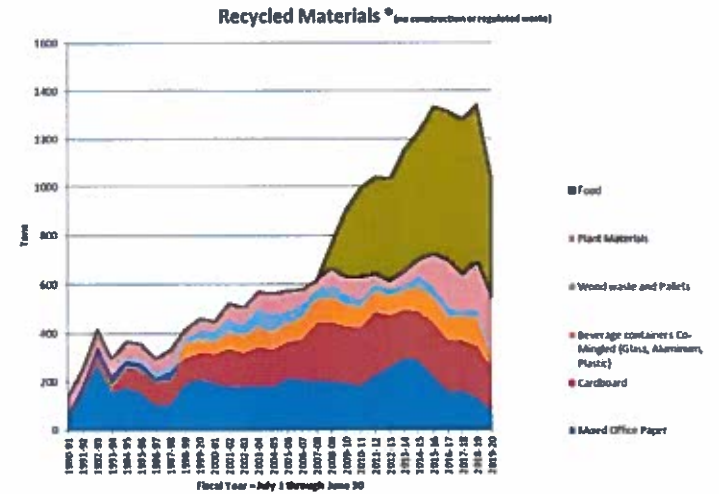
### Energy Efficiency Offsets New Demand From Growth



**WATER CONSERVATION GOALS**

- 1 Achieve Water Usage Intensity of 12 gallons potable per square foot by 2030 (22.3 in 2019)
- 2 Continue downward trend of potable water use (34%+ reduction since 2005 Baseline)

## Conservation Goals

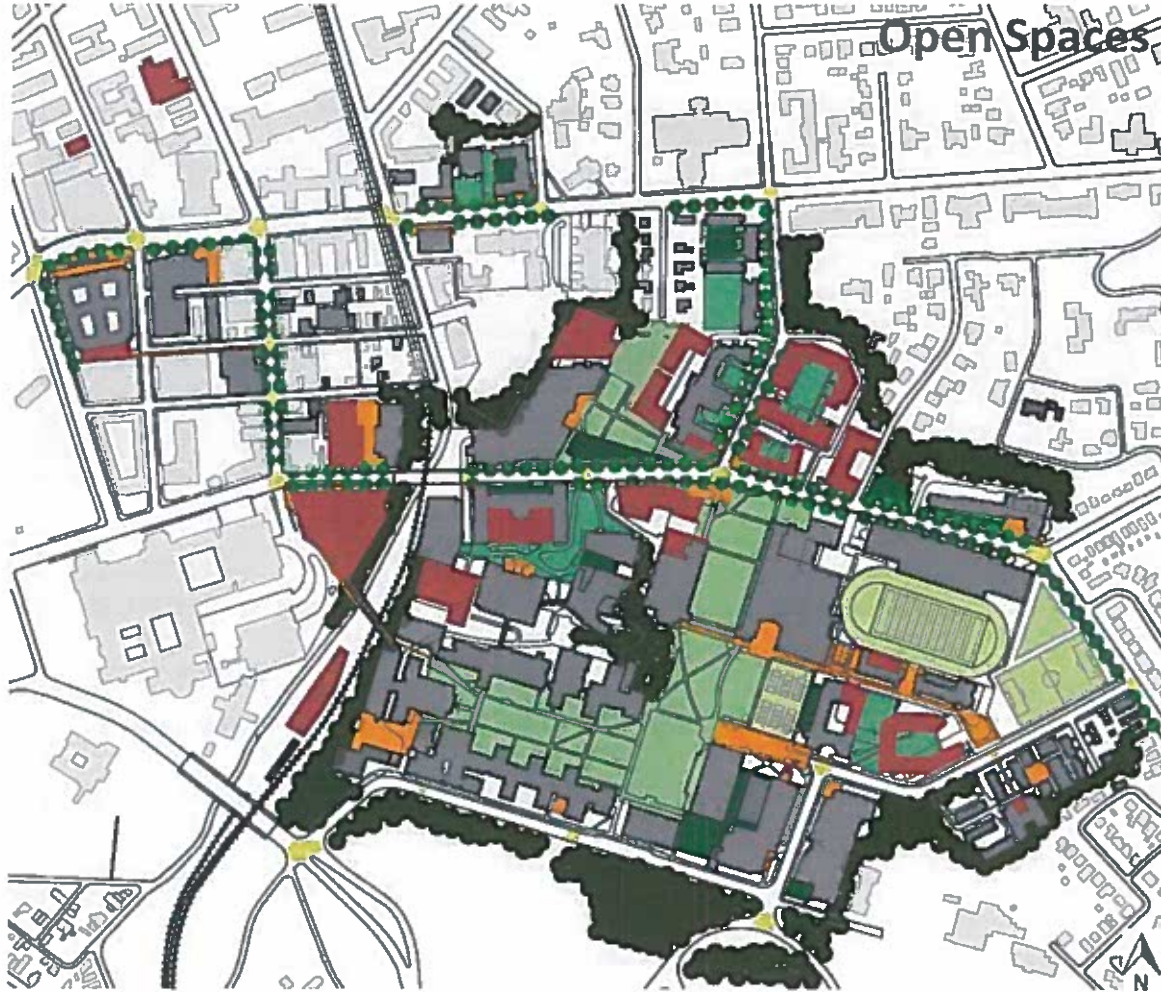


# Open Spaces and Pedestrian Circulation

**Zoning Code Reference**

905.03.D.4 (i) Open Space and Pedestrian Circulation Plan

The IMP shall include open space and pedestrian circulation guidelines and objectives, including a description of the circulation system to be provided through the campus and plans for ensuring the accessibility of pedestrian areas and open spaces.



- The Mall / The Cut / Tepper Quad
- Campus Quad
- Garden Space
- Densely Wooded Hillside
- Athletic Field / Playing Surface
- Pedestrian Courtyard / Plaza
- Urban Street with Trees
- Development Sites

1. Manage Impacts on Neighbors
2. Make Connections with the Community
3. Make Craig Street a Great Street
4. Provide Amenities that are open & available to All
5. Have a Positive Economic Impact on the Region

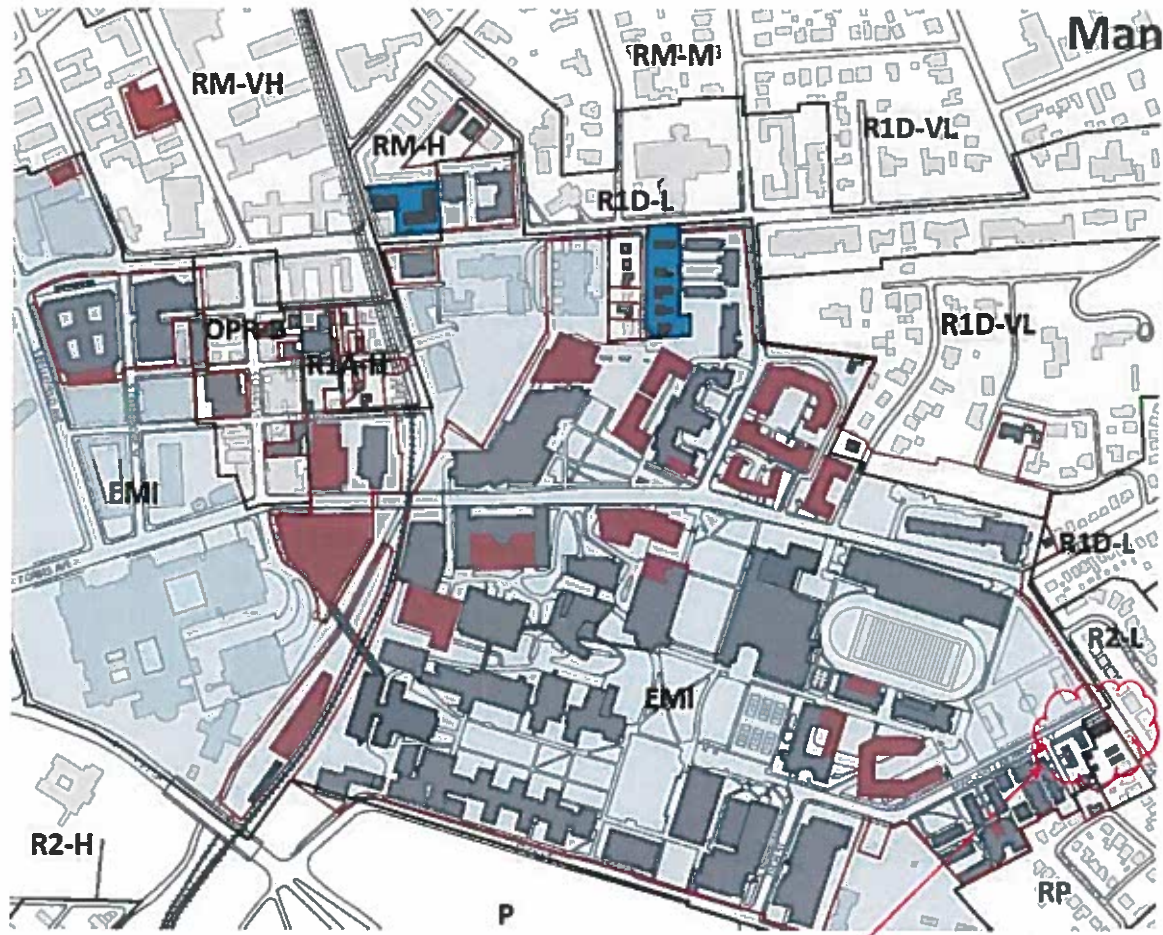
## Neighborhood Protection Goals

### Zoning Code Reference

905.03.D.4 (k) Neighborhood Protection Strategy

The IMP shall identify standards and programs that will be put in place to ensure that the quality of the surrounding neighborhoods is maintained or enhanced.





# Manage Impacts on Neighbors

- R1D-VL** Residential Single-Unit Detached, Very Low Density
- R1D-L** Residential Single-Unit Detached, Low Density
- R1A-H** Residential Single-Unit, High Density
- R2-L** Residential Two-Unit, Low Density
- R2-H** Residential Two-Unit, High Density
- RM-M** Residential Multi-Unit, Moderate Density
- RM-H** Residential Multi-Unit, High Density
- RM-VH** Residential Multi-Unit, Very High Density
- EMI** Educational Medical Institutional
- OPR-B** Oakland Public Realm
- P** Park
- H** Hillside
- RP** Residential Planned Unit Development
- Carnegie Mellon University Property in 2022 IMP
- EMI (Educational Medical Institutional) Zoning District
- Proposed Zoning Change to EMI (3 small areas)
- Development Sites

*Rezoning at Forbes/MMorrison eliminated*

## Make Connections with the Community

### Service

Providing service to communities where our neighbors live, work, and play is an essential part of every student's education. There are more than 40 student-run organizations with a primary purpose of community service.

[cmu.edu/student-affairs/slice](http://cmu.edu/student-affairs/slice)



### Education

Education at all stages of life:

- Preschool & Kindergarten
- K-12 Direct Instruction
- Pre-College
- OSHER Lifelong Learning Institute

More than 2 dozen service learning courses across all 7 colleges



### Arts & Culture

Building on the rich history of free expression and the world-changing capacity of creativity to transform and advance culture and society is a university priority





## Provide Amenities that are Open & Available to ALL

**Arts:** Theatres, concert venues, galleries

**Humanities:** Libraries

**Recreation:** Gesling stadium, Cut, Mall, paved pathways across campus

**Community events:**

- Spring Carnival
- Homecoming
- 4<sup>th</sup> of July Fireworks
- Division III sporting events

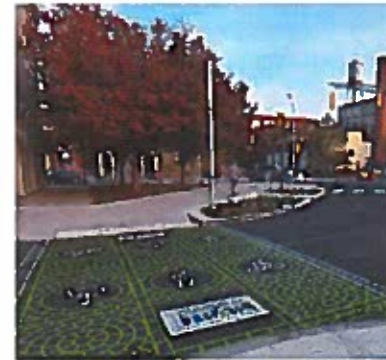
**Public art:** maps & online guide

**Develop improved connections to Schenley Park**





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Parking & Transportation Services



Pavement Treatments



Outdoor Seating Areas



Recapture Parking Spaces  
For Outdoor Seating

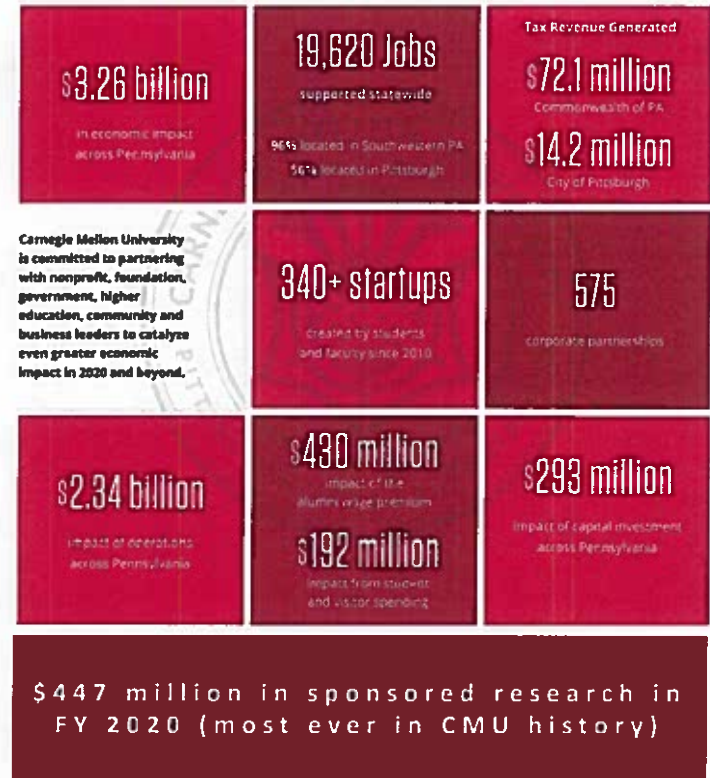


Stormwater Management in  
Landscaping

# Have a Positive Economic Impact on the Region



## Annual Local, Regional and State Economic Impact





**WEBPAGE**      <https://www.cmu.edu/cdfd/planning-and-design/master-plan/index.html>

**PAPER COPIES** Cohon Univ Cen Info Desk, Tepper Welcome Center, Hunt Library, Carnegie Library Main Branch

**EMAIL US!**      [cmu2022imp@andrew.cmu.edu](mailto:cmu2022imp@andrew.cmu.edu)

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